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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,367	04/07/2000	John Piechnick	6125/54125	1304

7590

12/02/2003

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EXAMINER

NGUYEN, TUYEN T

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)	
09/545,367	PIECHNICK, JOHN	
Examiner	Art Unit	
TUYEN T NGUYEN	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 9 and 15-16 are rejected under 35 U.S.C. 103(a) as being obvious by Eng, Jr. et al. [US 4,857,878] in view of Carbone et al. [EPO 0 933 789 A2].

Eng, Jr. et al. discloses a transformer [figures 1-2] comprising a bobbin structure [100] with primary and secondary windings wound thereabout, said the bobbin structure comprising:

- a first bobbin member [200] including a first body portion defining a first hollow region, axially spaced walls [302, 226, 224] extending radially away from the first body portion, and a tubular portion [205] extending away from the first body portion; and

- a second bobbin member [202] including a second body portion defining a second hollow region, the second body portion comprising two sections [see figure 3] at the periphery of the second hollow region forming a recess separate from the second hollow region, the recess shaped such that the tubular portion is positioned therewithin for joining the first and second bobbin members, axially spaced walls [212, 210] extending radially away from the second body portion, and a flange/lip

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[210b, figures 1-2] on one of the axially spaced walls of the second bobbin member and extending away from another of the axially spaced walls of the second bobbin member; and

wherein the first bobbin member is disposed adjacent to the second bobbin member and is partially enclosed by the flange/lip, the primary and secondary windings respectively wound about the first and second body portions, and wherein the first and second hollow regions are shaped to receive a core structure [102, 103] inserted therewithin.

Eng, Jr. et al. discloses the instant claimed invention except for a specific recess structure.

Carbone et al. discloses a bobbin structure for a planar transformer comprising:

- a first bobbin [1] including a rectangular tubular hollow structure [7] and a recess structure formed therewithin [figure 2]; and

- a second bobbin [2] including a rectangular hollow tubular structure [8].

wherein the hollow tubular structure of the second bobbin being inserted into the recess structure of the first bobbin.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the recess design of Carbone et al. in Eng, Jr. et al. for the purpose of joining the bobbin structures together and providing air path for the device.

3. Claims 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng, Jr. et al. in view of Carbone et al., as applied to claims 1 and 15-16 above, and further in view of Tobben et al. [US 4,596,974].

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Eng, Jr. et al. in view of Carbone et al. discloses the instant claimed invention except for the flanges/lips being *substantially* perpendicular to each other.

Tobben et al. discloses a transformer [figures 1 and 3] comprising a bobbin structure with primary and secondary windings wound thereabout, said the bobbin structure comprising:

- a first bobbin member [1] including a first body portion defining a first hollow region, axially spaced walls [9, 11] extending radially away from the first body portion;
- a second bobbin member [3] including a second body portion defining a second hollow region, axially spaced walls [21, 23] extending radially away from the second body portion, and a flanges [31, 33, 35] on one of the axially spaced walls of the second bobbin member and extending away from another of the axially spaced walls of the second bobbin member; and
- a plurality of terminal pins [29].

wherein the primary and secondary windings respectively wound about the first and second body portions.

wherein the first and second hollow regions are shaped to receive a core structure [47] inserted therewithin.

wherein the flanges being substantially perpendicular to each other.

It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use the flange design of Tobben et al. in the bobbin structure of Eng, Jr. et al., as modified, for the purpose of providing a creepage distance for the device.

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4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eng, Jr. et al. in view of Carbone et al., as applied to claim 1 above, and further in view of Dobberstein [US 4,549,130].

Eng, Jr. et al. discloses the instant claimed invention except for a *substantially planar conductive shield* disposed between the first and second bobbin members.

Dobberstein discloses a transformer including a bobbin structure, primary and secondary windings and a conductive shield member [123].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a conductive shield member design of Dobberstein in Eng, Jr. et al. for the purpose of reducing interference.

The specific shape/design of the conductive shield member would have been an obvious design consideration based upon the intended applicant use.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eng, Jr. et al. in view of Carbone et al. and Tobben et al., as applied to claim 2 above, and further in view of Equi et al. [US 4,939,623].

Eng, Jr. et al. in view of Tobben et al. discloses the instant claimed invention except for PCB mounting structure and its location relative to the flange/walls.

Equi et al. discloses a transformer including a PCB mounting structure [see figure 3].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a mounting structure in the bobbin structure of Eng, Jr. et al., as modified, as suggested by Equi et al. for the purpose of providing a mounting structure for the PCB.

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The specific location/arrangement of the mounting structure would have been an obvious design consideration based upon the environment/application use.

6. Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tobben et al. in view of Equi et al.

Tobben et al. discloses the instant claimed invention except for a PCB mounting structure and its location relative to the flange/walls.

Equi et al. discloses a transformer including a PCB mounting structure [see figure 3].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a mounting structure in the bobbin structure of Eng, Jr. et al., as modified, as suggested by Equi et al. for the purpose providing a mounting structure for the PCB.

Allowable Subject Matter

7. Claim 17 is allowed.

8. The following is an examiner's statement of reasons for allowance:

The prior art of record do not teach or suggest, in the claimed combination thereof, a transformer comprising first and second structures adapted to receive first and second printed circuit boards so that the first printed circuit board disposed parallel to the walls of the first bobbin member and perpendicular to the common axis and the second printed circuit board disposed parallel to the walls of the second bobbin member and perpendicular to the common axis, wherein the first and second structures are offset such that the first PCB and the second PCB are on different planes.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

9. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Elvin Enad, can be reached at (703) 308-7619. The fax number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

TTN *TTN*

December 1, 2003

Tuyen Nguyen